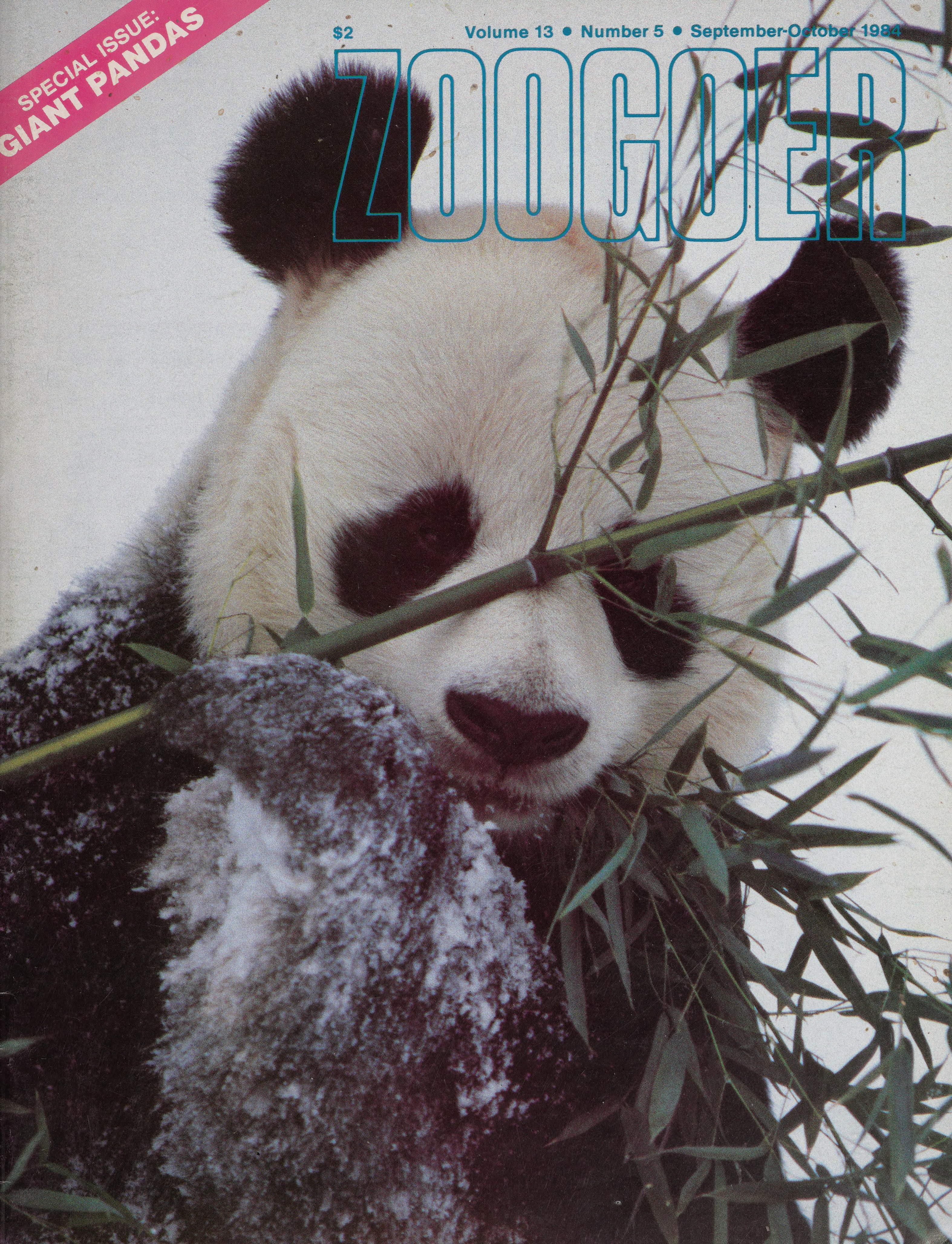


SPECIAL ISSUE:
GIANT PANDAS

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ZOOKEEPER



ZOOGOER

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Cover Photos

The only giant pandas permanently residing in the United States, Hsing-Hsing (front cover) and Ling-Ling (back cover) attract thousands of visitors every year to the National Zoo's Panda House. Photos by Jessie Cohen, NZP Office of Graphics.

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Milton Tierney

1984 Panda Breeding

Photos by Jessie Cohen, NZP Graphics and Exhibits

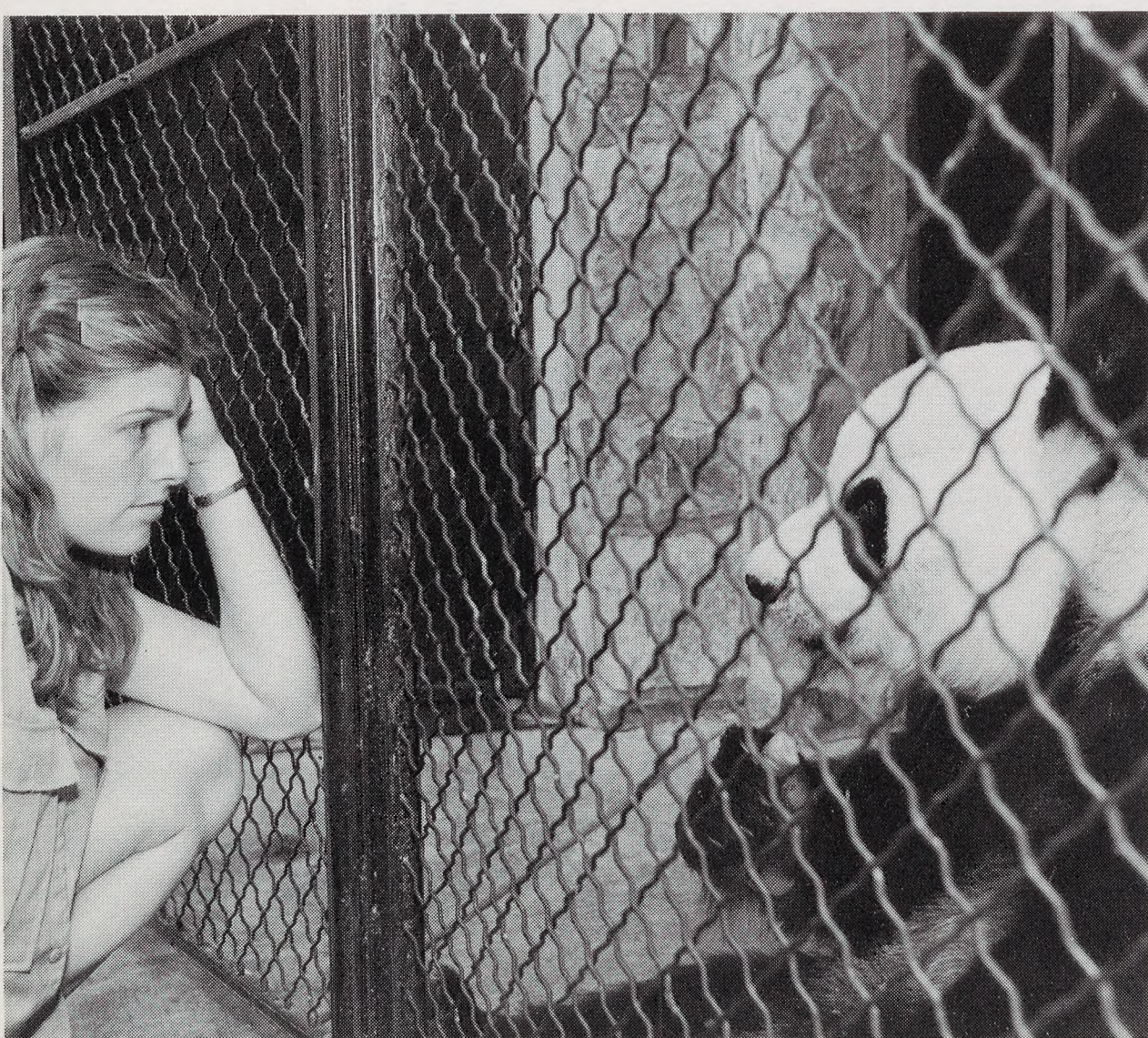
Ling-Ling's willingness to mate and her excellent maternal behavior bode well for the Zoo's giant panda breeding program, despite disappointment over the 1984 stillbirth.



March: On March 19, 1984, Ling-Ling and Hsing-Hsing bred twice.



June: On June 28, the Panda House was closed and Zoo visitors watched Ling-Ling on a tv screen in the Zoo's Education Building.



July: Keeper-leader Barbara Bingham, herself pregnant, reported on July 21 that Ling-Ling had built a bamboo nest.



August: Ling-Ling nuzzles her cub during delivery, at 10:34 p.m., August 5.

Panda Watch, 1984

Elizabeth Brett

Amidst intense media coverage and much disappointment, Ling-Ling delivered a stillborn male cub at 10:34 p.m., August 5, 1984.

The 5.3-ounce cub appeared normal. NZP Chief Pathologist Richard Montali said the cub died 6 to 12 hours before birth from bacteria in its bloodstream. The bacteria probably ascended the birth canal when the fetal membrane ruptured on July 27 and fluid was discharged.

Unlike last year's birth, Ling-Ling had clear contractions that started at 8:15 p.m. and continued regularly until birth. Because panda cubs are highly vocal and active

after birth, Zoo personnel knew almost immediately the cub was stillborn.

Ling-Ling held her cub until 7:00 a.m., August 6, when it was removed and an autopsy performed. After the cub's removal, Ling-Ling cradled apples and other objects. Panda Watch volunteers noticed this behavior for several days prior to the birth as well.

Ling-Ling's maternal behavior was recorded throughout the 1984 Giant Panda Pregnancy Watch. Her licking and gentle cradling of the stillborn cub suggest that Ling could be an excellent mother.

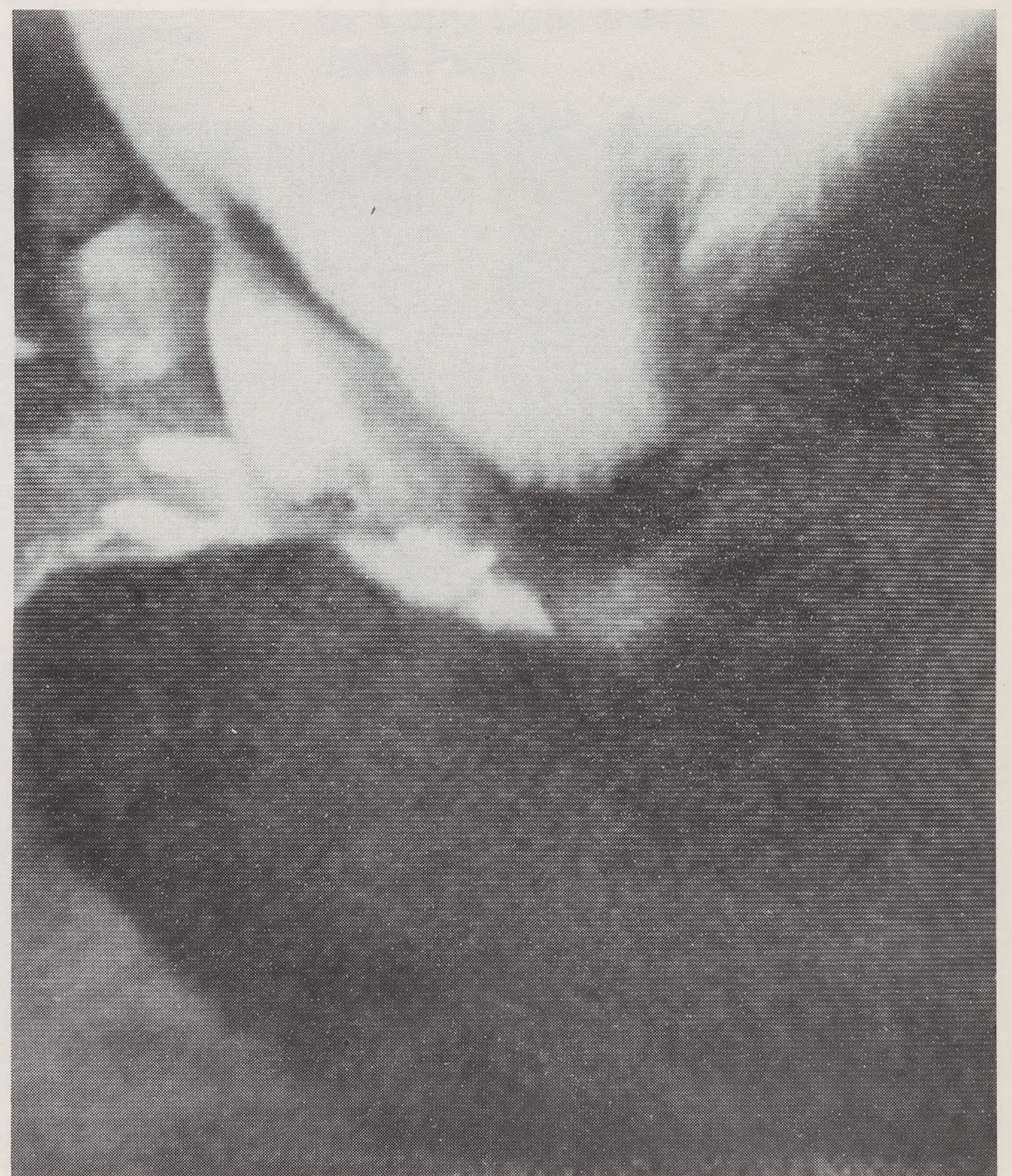
The 1984 watch was conducted by trained FONZ volunteers, who

began round-the-clock observation of Ling-Ling on June 18. The observation has been crucial because of the rarity of captive panda pregnancies and births and the lack of knowledge about panda physiology and behavior.

FONZ volunteers conduct Behavior Watches on a variety of

Right: In May, before the 1984 watch began, Ling spent most mornings lolling in her yard. (Photo: Michael Smith)

Below: During the birth, Bingham operated video equipment in the Panda House kitchen. Ling cradled her stillborn cub for several hours after the birth. (Photos: Jessie Cohen, NZP Graphics)

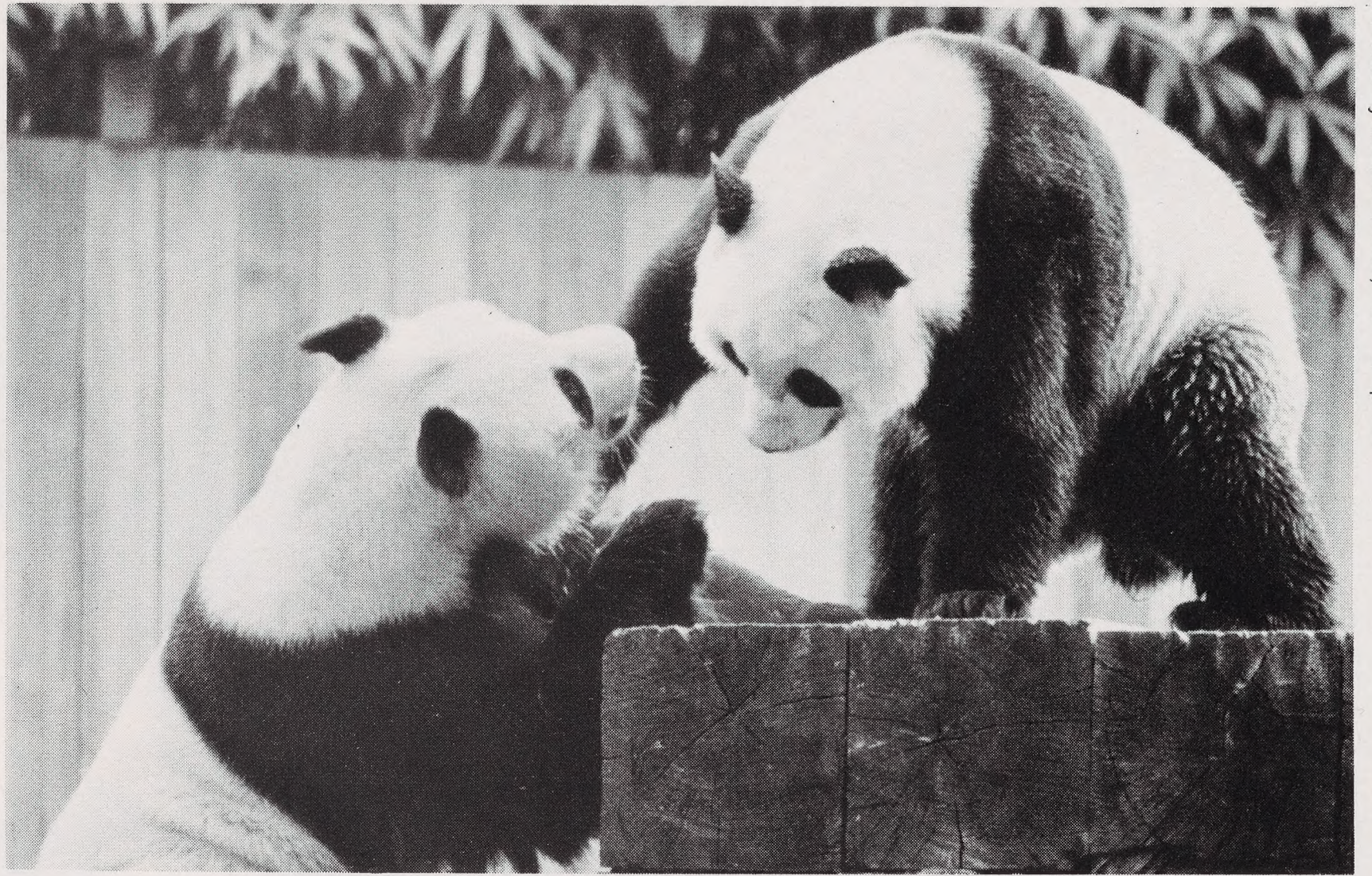




Zoo species. Through the watches, scientists get detailed data about the behavior of exotic species. Behavior Watches are established for many reasons—a mating, pregnancy or simply to gather data on typical daily behavior. Some watches last only a few hours; others can go on for months.

The Panda Pregnancy Watch is an intensified Behavior Watch using FONZ volunteers on three hour shifts around the clock. Though there is usually one volunteer on a shift, during Ling-Ling's late gestation a second volunteer was added.

The watch operates from the Panda House kitchen where the volunteers stare intently at a wall of video monitors, noting Ling-Ling's every move. Whether Ling-Ling is feeding, sleeping,



Photos by Jessie Cohen, NZP Graphics

grooming, defecating or vocalizing, each action is dutifully recorded on a Behavior Watch form.

The watchers are trained in

observation techniques, behavior record-keeping and the use of video cameras and recorders loaned to the Zoo by the National Geographic Society.

Volunteers must select which of four cameras to focus and adjust the correct microphone. Wherever Ling-Ling is, in her den or enclosure, a low-light "snooper" camera and microphone monitor her. The exhibit has three low-light roving cameras, five microphones, two still cameras and a color camera. Though all the roving cameras have the capacity, the color camera is used to transmit Ling-Ling's image to a tv monitor in the Zoo's Education Building lobby for public viewing.

Before the birth, anticipation was a two-edged sword—both thriller and killer—on "Preg Watches." As the sultry July evenings grew longer, tension mounted. The reward for long, tedious hours of volunteer work was nearing.

Paul Henderson, a computer



Hsing (on lower step) and Ling sometimes exchange powerful blows during play. Behavior Watch volunteers take detailed notes on the pandas' interactions.



analyst, began his weekly watch at 4:00 a.m. During the first weeks of his watches, Henderson said he felt the "vague anticipation of winning the lottery." Last year, he missed the birth by one day, much to his disappointment. He said the hope of being present at this year's birth kept him returning each week, although most of his watches were uneventful: Ling-Ling usually slept through the entire three hours.

Most of the watchers felt sure Ling-Ling was pregnant, even before the urinalyses had conclusive results; but there was no consensus about when the birth would take place. The giant panda gestation period can range from 97 to 163 days—meaning the birth could have occurred anytime from late June to early September.

In both 1983 and 1984, Ling-Ling and Hsing-Hsing mated in mid-March. Last year's birth occurred on July 21, so many watchers expected a late July birth this year.

Despite disappointment over the stillbirth, Zoo staff and FONZ volunteers see hopeful signs for a future panda birth. "Ling-Ling showed extraordinary capacity for maternal behavior," said NZP Director Michael Robinson.

Ling-Ling is expected to continue her estrus cycle for at least three or four more years and Hsing-Hsing has proved a capable mate, so prospects are good for eventual offspring.

When asked whether her enthusiasm was fading, Nell Ball, a long-time FONZ volunteer and panda watcher, said, "Those of us who work with the pandas will never give up." □

Like pandas in the wild, Ling-Ling and Hsing-Hsing spend most of their time alone. They have periodic encounters with each other throughout the year and daily encounters when Ling-Ling is in estrus.

Jessie Cohen, NZP Graphics



Jessie Cohen, NZP Graphics



The Panda's Past

Jake Page

The history of Western man's contact with the giant panda reads like "Raiders of the Lost Ark." It began with scientific curiosity, then turned to the bloody enthusiasm of the trophy hunter. It involved a race between a glamorous fashion designer from New York and a mysterious banker from Shanghai to capture the grail live. This itself became a race against the outbreak of world war, accompanied by media hype rivaling the return of Lindbergh, and later a matter of super-power diplomacy. Now there is a return to the dignity of science and the urgency of conservation. All of this in little more than a century!

The Chinese, of course, knew about the giant panda, or beishung (white bear) as they called it, since ancient times. There is a record of beishung pelts sent by the barbaric people of the southwestern regions to the Chinese emperor nearly 4,000 years ago. In the seventh century A.D., the Chinese apparently sent two live specimens and 70 pelts to the Japanese.

Yet the giant panda never seemed to make it into the big time until Westerners showed interest in it. It appears here and there in age-old Chinese children's stories, but there are apparently no illustrations or sculptures of the animal in all of ancient Chinese art. The Chinese never mythologized it, nor did they turn the

beishung into a pharmacopoeia as they did with many plants and animals.

Perhaps the beishung was ignored because it was rare and lived in remote bamboo forests on the edges of the Himalayas.

A change began in the 1860s, when an intense, dark-eyed French missionary named Pere David arrived in China as part of Europe's attempts to open it up to commerce and Christianity. But Pere David sought more than souls for his church: A highly trained naturalist, he was sponsored by his order *and* by the Museum of Natural History in Paris. This priest also sought biological specimens for science.

Although Pere David suggested

dourly that it would be some 40,000 years before the country could be converted to Christianity, he was supremely successful in his scientific endeavors. He shipped boatloads of plant and animal specimens, including a rare deer now called Pere David's deer, back to Paris to fill in the great zoological blanks in Western knowledge of the Orient.

During David's 12 years in China, he made three extensive collecting trips into the hinterlands. His second expedition took him to Szechuan and western China. On March 11, 1869, he became the first Westerner to see a giant panda skin—in the home of a hunter named Li, who assured the delighted and eager naturalist that he would be able to collect his



Drawings like this became popular in 20th century China, but there are no illustrations or sculptures of the giant panda in ancient Chinese art.

Jake Page is a free-lance writer and co-author of Ling-Ling and Hsing-Hsing: The Year of the Panda.

own in the days ahead.

On March 23, David noted in his diary, "My Christian hunters returned today after a ten day absence. They bring me a young white bear, which they took alive but unfortunately killed so it could be carried more easily." A week later the hunters brought in the remains of an adult.

David assumed that the specimens represented a new species of

bear and named it *Ursus melanoleucus* (black and white bear). He shipped the specimens to Paris where Alphonse Milne-Edwards, the son of the director of the museum, decided the beishung was anatomically nearer to raccoons and the smaller, recently discovered Asian red panda. (The word "panda" is a French corruption of a Tibetan term meaning bamboo eater.) Milne-Edwards

believed the new species constituted a separate genus, and called it *Ailuropodus melanoleuca* (cat-footed black and white animal).

Since then, its genus has remained stable but more than a century of debate has centered around the panda's taxonomic family. Although the public still calls it a bear, some scientists believe the giant panda belongs with the red panda in a separate family known as the *Ailuropodidae*, closely related to the raccoon family but of a perhaps more ancient lineage.

Pere David's panda specimens soon stimulated more than scientific interest. Shortly after the turn of the century, explorers set forth from Europe and America to become the first white man to kill what rapidly became the most challenging animal trophy on earth. Their lack of success led some Western scientists to wonder if the giant panda might have become extinct.

It was not until 50 years after Pere David's initial discovery that a Westerner held a live panda in his arms. This was a German zoologist, Hugo Weigold, who bought a youngster from some locals during a 1916 expedition; but it died soon after.

By 1928, the panda still eluded the rifles of the West. But in that year two of Teddy Roosevelt's sons, Theodore, Jr., and Kermit, decided to mount an expedition to west China and not return until they had shot a giant panda. Sponsored by the Chicago Field Museum and attended by copious



When Su-Lin became colicky in Shanghai, Ruth summoned a pediatrician to her hotel room. Photos like this, published in U.S. newspapers, convinced panda hunters never again to shoot so cuddly a creature.

public fanfare, the two Roosevelts set forth with a carefully selected party including a New York-born Chinese big game hunter.

In Szechuan they found the populace terrorized by bandits. Despite warnings, they penetrated further, into the land of the Lolos, a tribe of savage mountain dwellers who had murdered a previous panda seeker 20 years earlier.

The Roosevelts won the Lolos over and with their help, on April 13, 1929, they got their panda. Following a trail of panda droppings, they spotted a hollow tree from which a sleepy panda emerged and headed for a bamboo stand. Both brothers fired simultaneously and the panda dropped without a sound, subsequently to be stuffed and displayed in the Field Museum.

Immediately, other museums sought their own specimens and several elaborate expeditions ensued. By 1935, four Americans and two Europeans had shot giant pandas, and while these trophies did add to scientific knowledge—particularly in matters of distribution and range—the giant panda remained an enigma.

By this time the goal had changed: “Bring ‘em back alive” became the rallying cry for one of the oddest assortments of hunters in history.

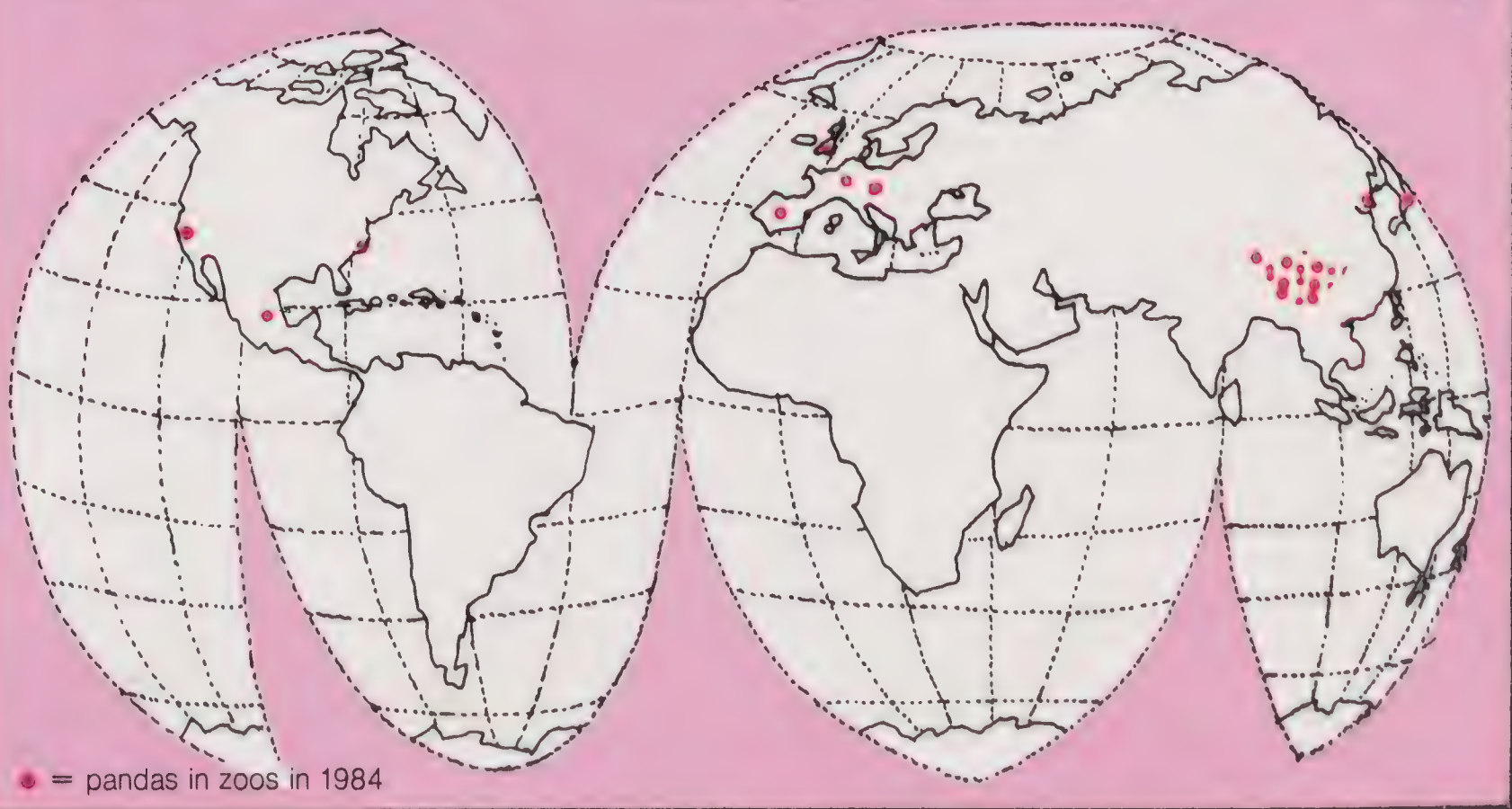
In the summer of 1934, William Harkness, who had recently captured several live Komodo dragons and presented them to the Bronx Zoo in New York, planned to do the same for the giant panda. Two weeks before he left, he married a New York dress designer, but his new wife, Ruth, did not accompany

Overleaf: Ling-Ling strolls across a balance beam in her recently furnished yard.
(Photo: Michael L. Smith)

Giant Pandas in Zoos

(Outside North Korea and China)

Name	Sex	Zoo	Arrival	Death
Su-Lin	M	Brookfield	1937	1938
Mei-Mei	M	Brookfield	1938	1942
Pandora	F	Bronx	1938	1941
Ming	F	London	1938	1944
Tang	M	London	1938	1940
Sung	M	London	1938	1939
Grandma	F	London	1938	1939
Pan	M	Bronx	1939	1940
Happy	M	St. Louis	1939	1946
Pao-Pei	F	St. Louis	1939	1952
Mei-Lan	M	Brookfield	1939	1953
Pandee	F	Bronx	1941	1945
Pandah	F	Bronx	1941	1951
Lien-Ho	M	London	1946	1950
Ping-Ping	M	Moscow	1957	1961
Chi-Chi	F	London	1958	1972
An-An	M	Moscow	1959	1972
Ling-Ling	F	Washington (National)	1972	living
Hsing-Hsing	M	Washington (National)	1972	living
Lan-Lan	F	Tokyo	1972	1979
Kang-Kang	M	Tokyo	1972	1980
Li-Li	M	Paris	1973	1974
Yen-Yen	M	Paris	1973	living
Ching-Ching	F	London	1974	living
Chia-Chia	M	London	1974	living
Pe-Pe	M	Mexico City	1975	living
Ying-Ying	F	Mexico City	1975	living
Chang-Chang	M	Madrid	1978	living
Shao-Shao	F	Madrid	1978	1983
Huan-Huan	F	Tokyo	1980	living
Fei-Fei	M	Tokyo	1980	living
Bao-Bao	M	West Berlin	1980	living
Tian-Tian	F	West Berlin	1980	1984
Tohui	F	Mexico City	1981	living
Chu-Lin	M	Madrid	1982	living
(unnamed)	M	Mexico City	1983	living
Ying-Xin	M	Los Angeles	(until Oct. 1984)	living
Yun-Yun	F	Los Angeles	1984	living







him to China.

After more than a year of frustration, delays, assorted disasters and disease, Harkness was dead in Shanghai. Ruth Harkness surprisingly decided to fulfill her husband's dream and set out for China in the spring of 1936. She sought out a man she called Zoology Jones, an English soldier of fortune and animal collector who had apparently briefly collaborated

When he first arrived at the National Zoo, Hsing-Hsing was smaller than Ling-Ling. Today, he is the larger and more daring of the two pandas. Below, he explores his tire swing, built this spring by FONZ volunteers. (Photos: R. Norman, The Christian Science Monitor)

with her husband in his unsuccessful quest. Zoology Jones was in fact Floyd Tangier Smith, an ex-banker from Shanghai who had turned to big game hunting, unsuccessfully seeking to bag a panda in the early 1930s as leader of the Marshall Field Expedition.

Smith had also decided to capture a live panda, and did not particularly welcome the amateur woman who arrived to compete. So Mrs. Harkness formed her own party and set out for panda country.

After a long overland journey and difficult bushwacking in the steep, snow-laden bamboo forests, the amateur succeeded. On November 9, 1936, she and her

party pulled from a hollow tree a squirming baby panda, less than three pounds and still with its eyes closed. She named it Su-Lin, meaning "a little bit of something very cute." Not quite a month later, after a race to Shanghai and a series of bureaucratic foul-ups, Ruth Harkness and Su-Lin sailed for America.

Meantime, Tangier Smith had apparently captured two giant pandas, one of which expired almost immediately and the other, dyed brown to confuse the Chinese customs officials, reached Shanghai but died on the boat to London.

It remains a bit unclear who actually made the first capture, and it has even been suggested darkly



that Ruth Harkness *bought* her panda from Smith, making her account of Su-Lin's capture a tissue of lies. Derring-do in exotic lands has often been accompanied by jealousy and murky details, but Mrs. Harkness is generally accorded the honor of being the first to get a live panda out of China.

On arriving in San Francisco, she and Su-Lin were mobbed by fascinated well-wishers. Eventually the pair made their highly publicized way to Chicago's Brookfield Zoo, but Mrs. Harkness decided she would let the Zoo have the panda only if they would finance her on another panda expedition. They demurred and the panda was taken to the Bronx Zoo where

officials decided they might not be equal to the job of caring for so little known an infant.

Eventually Su-Lin was taken in by the Brookfield Zoo. By then, her cuddly presence, plastered all over the newspapers, had remade public opinion. People were outraged that anyone ever again would deliberately shoot such an adorable creature. The four Americans who had shot giant pandas vowed they would never again do such a thing.

In 1938, Mrs. Harkness brought back another female panda, named Diana, although she had hoped to achieve a mating pair. Then, six weeks after Diana arrived, Su-Lin died of a freak accident; a piece of

wood caught in her throat. A post-mortem found that Su-Lin had been, in fact, a male, and when Diana expired in 1942, she too was found to be a he.

The difficulties of sexing pandas plagued collectors and zoos for years. The third panda to reach American shores was trapped by a native hunter and flown out of Hong Kong in the care of an American photographer, Roy Scott. Named Mei-Lan ("pretty flower"), it too eventually turned out to be a male. After being greeted by Dorothy Lamour upon his arrival in 1939, Mei-Lan was taken to Brookfield where he lived for nearly 14 years, dying in 1953.

Meanwhile, the Bronx Zoo had



obtained two pandas, a female (Pandora) and a male (Pan), but neither survived for more than two years. Then, in 1941, Mme. Chiang Kai-shek, out of gratitude for American relief aid, decided to present the U.S. with a pair of pandas. The animals were captured, but the war was going badly. An American emissary collected the pandas and flew them in a blacked-out plane over Japanese-held territory to Kowloon. A day later, just before Kowloon was bombed, they flew out of China and eventually arrived in the United States.

Pan-Dee and Pan-Dah took up residence at the then panda-less Bronx Zoo. Upon their deaths (in 1945 and 1951) both proved to be female.

The St. Louis Zoo also had giant pandas in these years—a male named Happy, purchased from a German dealer just before war broke out in Europe in 1939, and a female, Pao-Pei, which had been brought out of China the same year. By early 1954, however, 17 years after the first panda reached these shores, America was without pandas. This situation would continue for another 18 years.

In Europe, there had been a similar influx of pandas during this time, all without issue. A British panda named Chi-Chi, certifiably female, made a major zoological statement for detente in the 1960s when she was taken to Moscow to mate with the Russians' An-An. Alas, Chi-Chi rejected An-An with considerable feminine prejudice. Three decades after the first panda in modern times left China, pandas were found only in Russia, Britain and, of course, China.

Then, in 1972, President Richard Nixon amazed the world by making a trip to the Peoples' Republic, beginning to thaw an old friendship that had gone cold. Within two months of the President's

return, the National Zoo's Director Theodore Reed flew to China with two musk oxen, returning with two giant pandas, a gift to the American people.

Ling-Ling and Hsing-Hsing may well have taken up more columns of newsprint and more miles of videotape than any two creatures ever before. They were instant celebrities and have remained so, even through the agonizing, unsuccessful attempts at mating. It became fashionable to be a bit condescending about Hsing-Hsing's

lack of macho, though last year he was shown conclusively to have sired Ling-Ling's short-lived cub. (Soon after her natural mating with Hsing-Hsing, Ling-Ling was artificially inseminated with sperm from the London Zoo's male Chia-Chia.)

But along with their celebrity, the National Zoo's two pandas have spawned a remarkable cooperative scientific effort between two formerly suspicious nations. With the assistance of the World Wildlife Fund, which has long had



Jessie Cohen, NZP Graphics

the panda as its symbol, scientists have traveled back and forth between China and the U.S., pooling resources and information in a way unknown since before World War Two. Much information about these creatures has emerged— anatomical, medical, behavioral and, of course, reproductive.

Although no giant pandas have been born and survived in the U.S., there have been three successful panda births in the West. Two cubs were born and survived at Mexico City's Zoo in 1981 and 1983, and

one at the Madrid Zoo in 1982.

That panda cubs are now capable of being born in zoos is a crowning achievement, and very good news. Last year much of the bamboo in panda country chose to engage in its periodic synchronous dying. It will come back, of course, but only in time. No one knows precisely what effect the loss of its diet staple will have on the natural panda population, but the panda's ability to breed in captivity is a major hedge against future disaster.

Pandas are, of course, more than zoo stars and an inspiration to the toy industry. They are symbols of the fragility of spaceship earth and of the need for international cooperation. There are many reminders, of course, that we are all in this together; but none is so clear, so black and white, as *Ailuropoda melanoleuca*. □

Some scientists say the giant panda is related to the raccoon (far left) and red panda (below).



R. Y. Kaufman

NZP Office of Graphics and Exhibits



A Panda's First Year

Nell Ball

Hopes are high that next year Ling-Ling and Hsing-Hsing will produce a healthy cub. Their proven ability to mate and Ling's excellent maternal behavior are promising signs. Among the most hopeful is FONZ volunteer Nell Ball, who coordinates the Zoo's Behavior Watch program. Ball spent a year in Spain watching the Madrid Zoo's panda cub grow up. She promises National Zoo visitors that the joys of watching a young panda are well worth the wait!

His name is Chu-Lin. He is the survivor of twin giant pandas born at the Madrid Zoo on Sept. 4, 1982.

Chu-Lin's mother, Shao-Shao, and a male giant panda, Chang-Chang, were gifts to Spain from The People's Republic of China in 1978. Although the pair lived together amicably, they did not breed. So in April 1982, Shao-Shao was artificially inseminated with sperm from the London Zoo's male, Chia-Chia. The result—the first giant panda birth in Europe and the first twin birth outside of China.

Since mother pandas raise only one cub, Shao-Shao ignored the smaller of her twins, a female. The cub was placed in a sterilized incubator, but she died four days later from an infection.

Shao-Shao proved to be an excellent mother with Chu-Lin. For three days after the birth she hardly moved. She held the tiny cub constantly, usually in her arms,

occasionally tucked under her chin. On the fourth day, she laid him down briefly and took a drink of water. From then on, she put him down with increasing frequency while eating or to move to the far corner of the den to urinate and defecate.

At first Shao-Shao picked her cub up in her mouth, carefully transferring him to her arms. By the time he was two months old, lifting him with her mouth became difficult, so she would grab the handiest piece of cub—leg, ear, neck—and raise him until she could slide a paw under him to complete the process. Chu-Lin never struggled. He remained completely limp, but made loud screeching sounds while being lift-

ed or handled. The last time Shao was observed trying to lift her cub, he was a few days short of six months old.

For the first few months after the birth, Shao slept on the floor of her den, either sitting with the cub in her arms or lying with him held against her chest. In December, she returned to her sleeping platform, which was raised about four feet off the floor. The first time she did this, she brought the cub with her, alarming staff observers. Fortunately, she returned him to the floor nest area in two or three minutes. After that, she spent a good part of each night alone on the platform, returning to nurse the cub at regular intervals.



Chu-Lin, at four months old, plays with his food pan . . .

Nell Ball

For three months after the birth, Chu-Lin was completely helpless. He could roll from side to side or move only short distances by awkwardly squirming. He usually slept on his back with his rear legs stretched out and his front legs folded over his chest. When awake, his main activity was waving his legs in the air and moving his head from side to side, looking like a fat beetle that had fallen on its back and was trying to right itself.

By mid-December, Chu-Lin began pushing up into a sitting position. Two weeks later, he was making shaky attempts to stand—a process complicated by very short legs and a fat round stomach that kept getting in the way.

Walking took longer. It was the end of January before Chu-Lin developed sufficient coordination to keep all four legs moving in the same direction and in the correct sequence. The smallest obstacle would trip him up. He fell over everything—pieces of bamboo, lit-

tle piles of bedding, his mother and his own feet. He tried to avoid falling by lifting his feet twice as high as necessary, reminding me of a wind-up toy that was running down.

While Chu-Lin was learning to walk, he also began trying to climb, regularly stretching and clawing the wall with his front feet. Since his mother was the only climbable object available, he spent a good deal of time hauling himself all over her body. Shao ignored this completely unless the cub's climbing interfered with her eating. Then she would plant a hind foot solidly in his face, effectively preventing a close approach. This was the nearest she came to disciplining him. Even when the cub's play attacks resulted in obviously painful bites to her ears or feet, she never swatted or threatened him.

Shao's placid temperament gave the zoo staff an unexpected opportunity to obtain regular weights and measurements, beginning

shortly after birth. She would willingly leave her cub when offered food, and showed no anxiety over the separation, even on the few occasions that were slightly prolonged to permit photographs.

Once the cub could stand, keepers began offering him a specially prepared formula of rice cereal and baby food. It was an instant hit! For days he treated the pan of food like a wonderful new toy, great for wading in or using as a hat. When keepers resorted to placing small amounts of food directly in his mouth, he immediately spit it out. Extra honey in the formula finally started him eating on his own. Somewhat surprising was his total indifference to bamboo. Although he sometimes swallowed a few leaves while playing, he did not eat any significant amount until he was a year old.

In February, when Chu-Lin was becoming increasingly active, zoo staff decided to allow him outdoors. However, several problems had to be solved first. The panda yards in Madrid are surrounded on three sides by a dry moat six feet deep. A major concern was that the clumsy cub would fall onto the concrete bottom of the moat. A second difficulty was the male panda's habit of going into the moat on his side and climbing out on the female's side. Both problems were solved by installing clear plexiglass panels around the perimeter of the female's yard and into the moat where the yards joined. Another precaution was to lower the water level in the bathing tub from 20 inches to three inches.

Although Chu-Lin's official presentation to the public was scheduled for mid-March, a series of unofficial outings, attended only by zoo staff, began on February 28. The first try was thwarted by Shao, who would not permit the cub

A. L. Garcia del Campo



... and at five months, with panda-watcher Nell Ball.



Left: Mexico City's Yen-Yen and her year-old cub Tohui. "We don't worry too much about special panda diets," said a Mexico City Zoo official. "We just feed them what they like." "What's that?" asked a visitor. "Their favorite dish," the official grinned, "is barbecued chicken." (Photo: Farrell Grehan)



National Zoo Assistant Director Devra Kleiman holds a six-month-old panda born in China. (Photo: Nancy Nash)

Below: Madrid's Shao-Shao and her cub Chu-Lin at six months old. Seven months later, in October 1983, Shao-Shao died of a kidney infection. (Photo: Robert Ball)



through the gate into the yard. On the second attempt, he made it to the top of the ramp leading from the dens to the yards, lost his footing and promptly fell backwards. When he did make it to the yard, he crawled under some bushes and refused to come out.

The staff began having nightmares about the official presentation, which was to be attended by members of the Royal Family, the Mayor of Madrid, the Ambassador from China, assorted other dignitaries and dozens of press photographers. Shrubs were pruned or removed, the slope graded and subsequent practice outings, as well as the big event, went smoothly.

Chu-Lin never lost his interest in the shrubs. He chewed them, dug them up, rolled on them, tried to climb them and slept under them. We began calling him "El Labrador," the farmer.

When he wasn't rearranging the plantings, Chu-Lin practiced climbing. The yard was furnished with several shade trees and a 12-foot climbing tree. Early in April a horrified keeper found Chu-Lin at the top of the climbing tree, unable or unwilling to come down. The keeper had to climb up and retrieve the cub. Metal climbing guards were immediately installed on all trees.

Another potential disaster occurred when Chang-Chang, barred from his usual route through the moat, climbed a tree near the divider fence, walked out on a small limb and began to lower himself onto the fence. The keepers forced him away from the fence by yelling and clapping their hands. Radical surgery was performed on the tree.

By the first week in June, the young panda was making serious attempts to climb the plexiglass, and it was removed. This inspired

a whole new set of pastimes for an enterprising cub. His favorite was looking for a way into the moat. He would back up to the edge, lie flat on his stomach and cautiously lower one hind leg to feel for a claw-hold. A slight overhang and short legs defeated his efforts, but he never gave up trying. He also spent hours walking along the edge of the overhang or lying on his stomach with his head and forelegs dangling in space. In early June, when the water in the bath-

ing tub was returned to its normal level, splashing and wading in the tub became another regular part of Chu-Lin's routine.

By the end of July, Chu-Lin weighed slightly more than 70 pounds. He was playing less and sleeping more, exhibiting adult panda behavior patterns. Even so, he was far from grown up. When I left the panda enclosure on my last day at the zoo, he was leaning back against his mother, wearing his food pan like a hat. □



FONZ volunteer Ball's experience with Madrid's cub is a valuable asset at the National Zoo. (Photo: A. L. Garcia del Campo)



Veterinarians regularly weighed and measured Chu-Lin. (Photo: Nell Ball)

The Dancing Keeper

Larry Collins and Jake Page

The National Zoo's original panda team used to joke about the "panda-monium" that began in 1972, when Ling-Ling and Hsing-Hsing first arrived at the Zoo from China.

Ling-Ling was especially bold and frisky during her first weeks in Washington and really kept her keepers hopping! In Ling-Ling and Hsing-Hsing: The Year of the Panda, Jake

Page and NZP staffer Larry Collins tell of an early encounter between Ling and her keepers Dave Bryan, Curley Harper and Tex Rowe:

Dave Bryan and I were outside the glass wall with the visiting crowd when we heard someone shout, "Oh, look! He's playing with her!"

"Oh, my God," groaned Dave as we turned to look through the glass. Tex had entered her enclosure with her food and, keeping a

The Zoo's original panda team, left to right: Tex Rowe, Curley Harper, Larry Collins, Mike Johnson, Dave Bryan. (Photo: Larry Collins)



wary eye on the panda, assumed he was safe since she was reclining across the room from him. But in a split second she was on him and had forced him against the wall in a corner. A potted bamboo hemmed him in on his third side and Ling-Ling was in front of him. With the unique grasping paw that pandas possess, Ling-Ling had grabbed him just under his right knee and attempted to sink her teeth into his left leg.

Tex recalled later that once he realized her teeth had bitten through only his cowboy boot, missing his anklebone, he ceased to be scared and concentrated on keeping his left leg wiggling so

that she could not get a good shot at it.

"So I danced," says Tex. "She had a hold of my right leg with her hand and I just kept kicking and waving my left. I was dancing, I'll tell you. The people out there thought I was dancing too."

At this point Curley Harper darted into the enclosure, grabbed Ling-Ling's haunches in his hands, and pulled her off Tex. She went for Curley and that was just enough of a distraction for Tex to escape through the side door. Meanwhile I had been trying to get into the den from the public area and was having a frustrating bout with several keys on my chain. Dave Bryan, having an extremely fast draw with the necessary passkey, opened the door. We found that Tex was already out of the enclosure via a

different door which was shut behind him. But Curley was still in there. I thought, with a sinking feeling in my chest, he would surely be torn apart.

Both men still guffaw over my reaction when we recall the incident, and Tex will say, "Curley, there, he's fast as a bullet when he needs to be. He got old Ling off me and then he left so fast I didn't see him go by either."

"It was splitsville," agrees Curley.

Several weeks afterward, when someone happened to ask Tex how many claws there are on a panda's foot, he hiked up his right trouser leg to the knee and said, "Well, let's see. One, two, three..."

□

Just arrived at the National Zoo from China, Ling-Ling peers through the bars of her shipping crate.

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